

SUMMARY

The response of well-stocked second-growth coastal redwood stands to three levels of commercial thinning is reported after 29 years of growth. Commercial thinning treatments left 25%, 50%, 75% and 100% (uncut control) of the original basal area (400 sq. ft.) in a 40-year old stand on the Jackson Demonstration State Forest. Stand values are given for basal area, number of trees, average diameter, and cubic foot volume and board foot volume per acre for the pre-treatment stand and five post treatment inventory dates from 1970 to 1999.

There are significant differences between the treatments in stand basal area, average diameter, and volume that have remained throughout the course of the study. Analysis of the periodic growth rate reveals strong statistical differences between the treatments in diameter growth but no significant differences in the basal area or cubic and board foot volume growth.

Total yield in board foot volume was not statistically different due to the high variation but a graphical analysis suggests that the 25% retention treatment produced a lower yield than the other three treatments, including the uncut control.

Though this was not a regeneration harvest, regeneration was measured for inference to partial harvest management. The response of the understory regeneration was strongly affected by the density of the overstory canopy. A precommercial thinning study of the redwood sprouts showed a response only in the 25% overstory retention treatment.